

Figure 1: Nucleic Acid coding sequence human histamine H4

ATGCCAGATACTAATAGCACAAATCAATTTATCACTAAGCACTCGTGTTACTTTAGCATTT
TTTATGTCCTTAGTAGCTTTTGCTATAATGCTAGGAAATGCTTTGGTCATTTTAGCTTTTG
TGGTGGACAAAAACCTTAGACATCGAAGTAGTTATTTTTCTTAACCTGGCCATCTCTG
ACTTCTTTGTGGGTGTGATCTCCATTCCTTTGTACATCCCTCACACGCTGTTTGAATGGG
ATTTTGGAAAGGAAATCTGTGTATTTTGGCTCACTACTGACTATCTGTTATGTACAGCAT
CTGTATATAACATTGTCCTCATCAGCTATGATCGATACCTGTCAGTCTCAAATGCTGTGT
CTTATAGAACTCAACATACTGGGGTCTTGAAGATTGTTACTCTGATGGTGGCCGTTTGG
GTGCTGGCCTTCTTAGTGAATGGGCCAATGATTCTAGTTTCAGAGTCTTGGAAGGATGA
AGGTAGTGAATGTGAACCTGGATTTTTTTCGGAATGGTACATCCTTGCCATCACATCATT
CTTGGAATTCGTGATCCCAAGTCATCTTAGTCGCTTATTTCAACATGAATATTTATTGGAG
CCTGTGGAAGCGTGATCATCTCAGTAGGTGCCAAAGCCATCCTGGACTGACTGCTGTCT
CTTCCAACATCTGTGGACACTCATTGAGAGGTAGACTATCTTCAAGGAGATCTCTTTCTG
CATCGACAGAAGTTCCTGCATCCTTTTATTGAGAGACAGAGGAGAAAGAGTAGTCTC
ATGTTTTCTCAAGAACCAAGATGAATAGCAATACAATTGCTTCCAAAATGGGTTCTTT
CTCCCAATCAGATTCTGTAGCTCTTACCAAAGGGAACATGTTGAACTGCTTAGAGCCA
GGAGATTAGCCAAGTCACTGGCCATTCTTTAGGGGTTTTTGTGTTTGTGTTGGGCTCCAT
ATTCTCTGTTTACAATTGTCCTTTTATTTCCTCAGCAACAGGTCCTAAATCAGTTTG
GTATAGAATTGCATTTTGGCTTCAGTGGTTCAATTCCTTTGTCAATCCTCTTTTGTATCCA
TTGTGTACAAAGCGCTTTCAAAAGGCTTCTTGAAAAATATTTTGTATAAAAAAGCAACC
TCTACCATCACAAACACAGTCGGTCAGTATCTTCTTAA

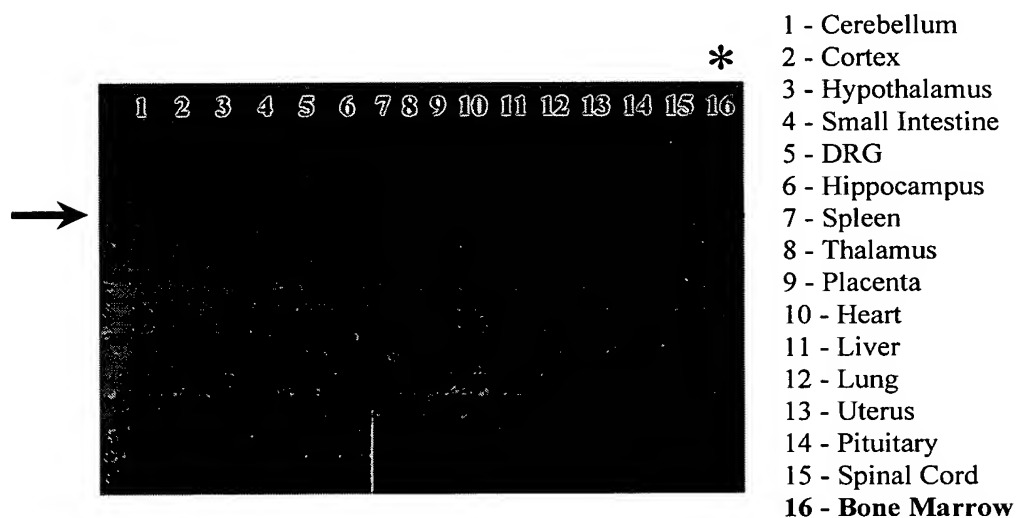
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Figure 2: Amino acid sequence human histamine H4 receptor

Met Pro Asp Thr Asn Ser Thr Ile Asn Leu Ser Leu Ser Thr Arg Val Thr Leu
Ala Phe Phe Met Ser Leu Val Ala Phe Ala Ile Met Leu Gly Asn Ala Leu Val
Ile Leu Ala Phe Val Val Asp Lys Asn Leu Arg His Arg Ser Ser Tyr Phe Phe
Leu Asn Leu Ala Ile Ser Asp Phe Phe Val Gly Val Ile Ser Ile Pro Leu Tyr
Ile Pro His Thr Leu Phe Glu Trp Asp Phe Gly Lys Glu Ile Cys Val Phe Trp
Leu Thr Thr Asp Tyr Leu Leu Cys Thr Ala Ser Val Tyr Asn Ile Val Leu Ile
Ser Tyr Asp Arg Tyr Leu Ser Val Ser Asn Ala Val Ser Tyr Arg Thr Gln His
Thr Gly Val Leu Lys Ile Val Thr Leu Met Val Ala Val Trp Val Leu Ala Phe
Leu Val Asn Gly Pro Met Ile Leu Val Ser Glu Ser Trp Lys Asp Glu Gly Ser
Glu Cys Glu Pro Gly Phe Phe Ser Glu Trp Tyr Ile Leu Ala Ile Thr Ser Phe
Leu Glu Phe Val Ile Pro Val Ile Leu Val Ala Tyr Phe Asn Met Asn Ile Tyr
Trp Ser Leu Trp Lys Arg Asp His Leu Ser Arg Cys Gln Ser His Pro Gly Leu
Thr Ala Val Ser Ser Asn Ile Cys Gly His Ser Phe Arg Gly Arg Leu Ser Ser
Arg Arg Ser Leu Ser Ala Ser Thr Glu Val Pro Ala Ser Phe His Ser Glu Arg
Gln Arg Arg Lys Ser Ser Leu Met Phe Ser Ser Arg Thr Lys Met Asn Ser Asn
Thr Ile Ala Ser Lys Met Gly Ser Phe Ser Gln Ser Asp Ser Val Ala Leu His
Gln Arg Glu His Val Glu Leu Leu Arg Ala Arg Arg Leu Ala Lys Ser Leu Ala
Ile Leu Leu Gly Val Phe Ala Val Cys Trp Ala Pro Tyr Ser Leu Phe Thr Ile
Val Leu Ser Phe Tyr Ser Ser Ala Thr Gly Pro Lys Ser Val Trp Tyr Arg Ile
Ala Phe Trp Leu Gln Trp Phe Asn Ser Phe Val Asn Pro Leu Leu Tyr Pro Leu
Cys His Lys Arg Phe Gln Lys Ala Phe Leu Lys Ile Phe Cys Ile Lys Lys Gln
Pro Leu Pro Ser Gln His Ser Arg Ser Val Ser Ser

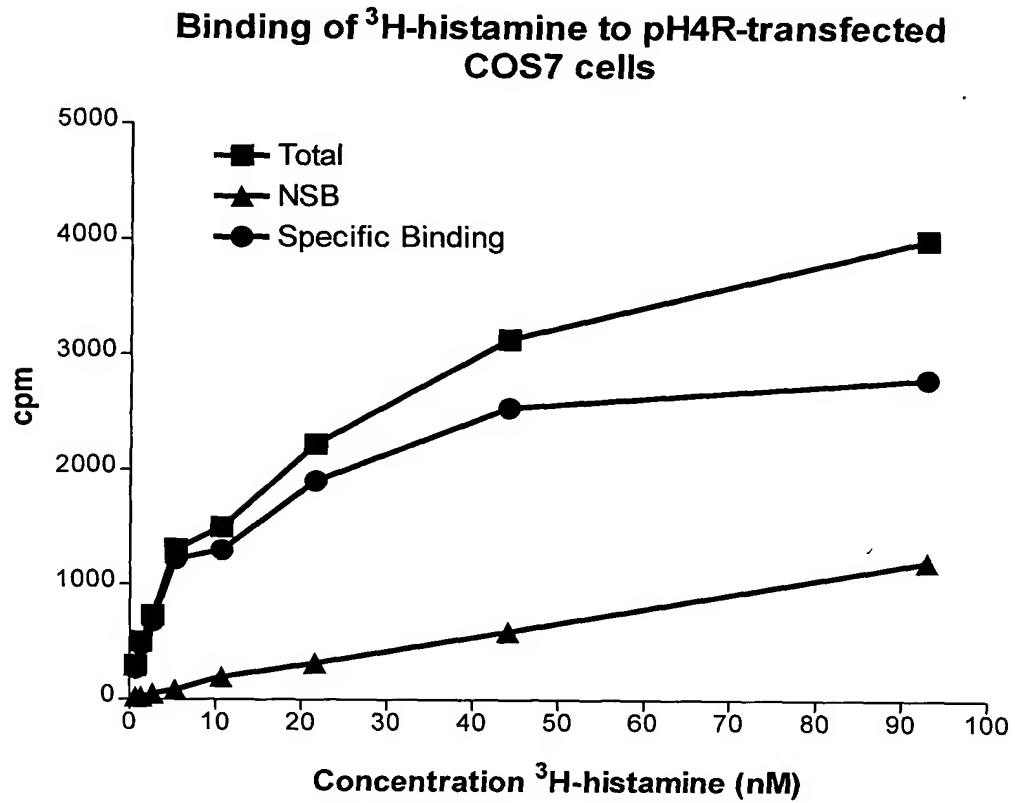
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Figure 3: Tissue Distribution of human histamine H4 receptor



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Figure 4: Binding of [³H]-histamine to pH4R expressing COS7 cells.



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FIGURE 5A

Mouse H4 DNA coding region (SEQ.ID.NO.:5)

ATGTCGGAGTCTAACAGTACTGGCATCTTGCCACCAGCTGCTCAGGTCCCCTTGGCATTTTTAATGT
CTTCATTTGCCTTTGCTATAATGGTAGGCAATGCTGTGGTCATCTTAGCCTTTGTGGTGGACAGAAA
CCTTAGACATCGAAGTAATTATTTTTTTCTTAATTTGGCTATTTCTGACTTCCTCGTGGGTTTGATT
TCCATTCTCTGTACATCCCTCACGTGTTGTTTAACTGGAATTTTGGAAGTGGAATCTGCATGTTTT
GGCTCATTACTGACTATCTTTTGTGCACCGCATCTGTCTACAATATTGTCTCATTAGCTACGATCG
ATACCAGTCAGTTTCAAATGCTGTGTCTTATAGGGCTCAACACACTGGCATCATGAAGATTGTTGCT
CAAATGGTGGCTGTTTGGATACTGGCTTTCTTGGTAAATGGCCCGATGATTCTGGCTTCAGATTCTT
GGAAGAACAGCACGAACACAAAGGACTGTGAGCCTGGCTTTGTTACAGAGTGGTACATCCTCACCAT
TACAATGCTCTTGAATTCCTGCTTCCTGTCTCTGTGGCTTATTTCAATGTACAGATTTACTGG
AGCCTGTGGAAGCGTAGGGCTCTCAGTAGGTGCCCTAGCCATGCTGGATTCTCCACTACCTCTTCCA
GTGCTTCAGGACACTTACACAGAGCTGGGGTGGCTTGCAAGACAAGTAATCCTGGATTGAAGGAATC
AGCTGCATCTCGTCACTCAGAAAGTCCTCGAAGAAAGAGCAGCATCCTGGTGTCTTAAGGACTCAC
ATGAACAGCAGTATCACTGCCTTCAAAGTGGGTTTCTTCTGGCGATCGGAAAGTGCAGCGCTTCGCC
AAAGGGAGTACGCAGAGCTTCTCAGAGGCAGGAAGCTAGCCAGGTCACTGGCCATCCTTCTGAGCGC
TTTTGCCATTTGCTGGGCTCCATACTGTCTGTTTACAATTGTCCTTTCACTTACCCAGAACGGAA
CGCCCCAAATCGGTGTGGTACAGCATTCGCTTCTGGCTGCAATGGTTCAATTCGTTTGTTAATCCCT
TTCTGTACCCTTTGTGTACAGGCGTTTCCAGAAGGCTTTCTGGAAGATACTTTGTGTGACAAAGCA
ACCAGCGCTGTACAGAACCAGTCAGTATCTTCTTGA

FIGURE 5B

Rat H4 DNA coding region (SEQ.ID.NO.:6)

ATGTCGGAGTCTAACGGCACTGACGTCTTGCCACTGACTGCTCAAGTCCCCTTGGCATTTTTAAATGT
CCCTGCTTGCTTTTGGCTATAACGATAGGCAATGCTGTGGTCATTTTAGCCTTTGTAGCAGACAGAAA
CCTTAGACATCGAAGTAATTATTTTTTCTTAATTTGGCTATTTCTGACTTCTTCGTGGGTGTCATC
TCCATTCTCTGTACATCCCTCACACGCTGTTTAACTGGAATTTTGGAAAGTGAATCTGCATGTTTT
GGCTCATTACTGACTATCTTTTGTGCACAGCATCCGTCTACAGTATTGTCCTCATTAGCTACGATCG
ATACCAGTCAGTTTCAAACGCTGTGCGTTATAGAGCACAGCACACTGGCATCCTGAAAATTGTTGCT
CAAATGGTGGCTGTTTGGATACTGGCTTTCTTGGTCAATGGCCCAATGATTCTGGCTTCGGATTCTT
GGAAGAACAGCACCAACACAGAGGAGTGCGAGCCTGGCTTTGTTACTGAGTGGTACATCCTCGCCAT
TACAGCATTCTTGGAATTCCTGCTCCCTGTCTCCTTGGTGGTCTATTTCAAGTGTACAGATTTACTGG
AGCCTGTGGAAGCGTGGGAGTCTCAGTAGGTGCCCTAGCCACGCTGGATTCATCGCTACCTCTTCCA
GGGGCACTGGACACTCACGCAGAACTGGGTGGCTTGTTAGGACAAGTCTTCCTGGATTAAAGGAACC
AGCCGCATCCCTTCATTCAGAAAGTCCACGAGGAAAGAGCAGTCTCCTGGTGTCTTAAGGACTCAC
ATGAGCGGTAGTATCATCGCCTTCAAAGTGGGTTCCTTCTGCCGATCAGAAAGCCCAGTGCTTCACC
AGAGAGAGCACGTGGAGCTTCTCAGAGGCAGGAAGCTAGCCAGGTCGCTAGCTGTCCTCCTGAGTGC
TTTTGCCATTTGCTGGGCTCCGTATTGCCTGTTTACAATTGTTCTTTCAACTTATCGCAGAGGGGAG
CGCCCCAAATCGATTTGGTACAGCATAGCCTTTTGGCTACAGTGGTTCAATTCACCTATTAATCCCT
TTCTATACCCTTTGTGCCACAGACGTTTCCAGAAGGCTTTCTGGAAGATACTCTGTGTGACAAAGCA
ACCAGCACCTTCACAGACCCAGTCAGTATCTTCTTGA

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FIGURE 5C

Guinea Pig H4 DNA coding sequence (SEQ.ID.NO.:7)

ATGTTGGCAAATAACAGTACAATCGCCTTAACATCAATTAATAATTTCTTTGACATTTTAA
ATGTCTTTACTAGCTATTGCTATAATGTTAGGCAATGTCGTGGTCATTTTAGCTTTTATTG
TGGACAGAAATCTTAGACATCGAAGTAATTACTTTTTTCTTAACCTGGCCATTGCAGACT
TCTTTGTGGGTGCAATTGCAATTCCTCTGTACATACCTTCCTCGCTGACTTACTGGACTT
CTGGAAAGCAAGCTTGTGTATTTTGGCTCATTACTGACTATCTTTTATGtACAGCATCTGT
GTATAATATTGTCTCATCAGCTACGATCGCTACCAGTCAGTCTCAAATGCCGTGTGGTA
TAGAGCTCAGCACTCTGGCACCTGGAAAATTGCTACTCAGATGGTGGCTGTTTGGATAT
TCTCCTTCATGACAAATGGGCCGATGATTCTGATTTTCAGACTCTTGGCAGAATAGCACT
ACAGAATGTGAACCTGGATTTTTTAAAAAAGTGGTACTTTGCTCTCCCTACATCATTATTG
GAATTCCTGATCCCCATCTTGTTAGTTGCTTATTTTCAGCGCCCATATTTACTGGAGCCTG
TGGAAGCGAGAGAAACTGAGCAGGTGCCTCAGCCACCCTGTACTCCCCCTGACTCTTC
CAGCAGTGACCACGGACACTCCTGCAGACAGGACCCCGATTCAAGGGCGACTCTGCCA
GCACGGAAAGAAACAACCTGCCTCTCTTGGTTCAGACAAGTCACGGAGAAAGAGCAGTC
TCTTGTTTTCCATAAGAGCCTACAAGAACAGCAATGTGATCGCTTCCAAAATGGGCTTC
CTCTCCCACTCAGATTCCCTGGCTCTTCAGCAAAGGGAACATATCGAACTTTTCAGAGC
CAGGAAATTAGCCAAGTCACTGGCCATACTCTTAGCAGCTTTTGCCATTTGCTGGGCTCC
ATATTCACTGACTACAGTTATCTACTCATTTTTTCTGAAAGGAACTTGACTAAATCAAC
CTGGTACCATACTGCCTTTTGGCTCCAGTGGTTCAATTCCTTTGTAAATCCCTTTTTGTAT
CCATTGTGTCACAAACGTTTTTCAGAAGGCTTTTCTGAAAATACTTCCTGTGAGAAGGCA
ATCCACGCCACCACACAACCGCTCAATATCCACTTGA

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FIGURE 6A

Mouse histamine H4 receptor protein sequence (SEQ.IN.NO.:8)

MSESNSTGILPPAAQVPLAFLMSSFAFAIMVGNAVILAFVVDRNLRHRSNYFFLNLAISDFL
VGLISIPLYIPHVLFNWNFGSGICMFWLITDYLLCTASVYNIVLISYDRYQSVSNVSYRAQH
TGIMKIVAQMVA VWILAFLVNGPMILASDSWKNSTNTKDCEPGFVTEWYILTITMLLEFLLP
VISVAYFNVQIYWSLWKRRALSRCP SHAGFSTTSSSASGHLHRAGVACRTSNPGLKESAASR
HSESPRRKSSILVSLRTHMNSSITAFKVG SFWRSESAALRQREYAELLRGRKLARSLAILLSA
FAICWAPYCLFTIVLSTYPRTERPKSVWYSIAFWLQWFNSFVNPFLYPLCHRRFQKAFWKIL
CVTKQPALSQNQSVSS

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FIGURE 6B

Rat histamine H4 receptor protein sequence (SEQ.ID.NO.:9)

MSESNGTDVLPLTAQVPLAFLMSLLAFAITIGNAVVILAFVADRNLRHRSNYFFLNLAISDFF
VGVISIPLYIPHTLFNWNFGSGICMFWLITDYLLCTASVYSIVLISYDRYQSVSNAVRYRAQH
TGILKIVAQMVA VWILAFLVNGPMLASDSWKNSTNTEECEPGFVTEWYILAITAFLEFLLPV
SLVVYFSVQIYWSLWKRGSLSRCPSHAGFIATSSRGTGHSRRTGLACRTSLPGLKEPAASLH
SESPRGKSSLLVSLRTHMSGSIIFKVGSFCRSESPVLHQREHVELLRGRKLARSLAVLLSAF
AICWAPYCLFTIVLSTYRRGERPKSIWYSIAFWLQWFNSLINPFLYPLCHRRFQKAFWKILCV
TKQPAPSQTQSVSS

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FIGURE 6C

Guinea Pig histamine H4 receptor protein sequence (389 amino acids)
(SEQ.ID.NO.:10)

MLANNSTIALTSIKISLTFLMSLLAIAIMLGNVVVILAFIVDRNLRHRSNYFFLNLAADFFVG
AIAIPLYIPSSLTYWTSGKQACVFWLITDYLLCTASVYNIVLISYDRYQSVSNVWYRAQHS
GTWKIATQMVAVWIFSFMTNGPMLISDSWQNSTTECEPGFLKKWYFALPTSLLLEFLIPILLV
AYFSAHIYWSLWKREKLSRCLSHPVLPDSSSSDHGHSCRQDPDSRATLPARKETTASLGSD
KSRRKSSLLFSIRAYKNSNVIASKMGFLSHSDSLALQQREHIELFRARKLAKSLAILLAFAIC
WAPYSLTTVIYSFFPERNLTKSTWYHTAFWLQWFNSFVNPFLYPLCHKRFQKAFKILPVRR
QSTPPHNRSIST

Figure 7A

Nucleotide Sequence Comparison of Human (SEQ ID NO:1), Guinea Pig (SEQ ID NO:7), Mouse (SEQ ID NO:5), and Rat H4 (SEQ ID NO:6)

Human: ATGACGATCTAATGACCAATCAATTATACAGGACTGCGTACTTACGATTTTATAGTCCTTAGTAGCTTTGGCTATATGCTAGGAATGCTTTGGTCATTTAGCTTTT 120

Human:	ATGCCAGATACATATGACACAAATCAATTAATTAACATAAGGACGCTGGTTACTTATAGCATTTTATATGTCCTTAGTAGCTTTTGCTATATATGCTTAGAAGAAATGCTTTGGCATTTTAGCTTTT	117
Guinea Pig:	ATGTTGGCAATAACAGTACATCAATATGCTCTTAACA--TCAATTAATAATTTCTTGACATTTTATATGTCCTTAATAGCTATATAGTGAACAATGTCGTGGTCATTTTAGCTTTT	117
Mouse:	ATGTCGAGCTCTAACAGTACTGGGACTTTGGCACAACGCTGCTCAGGTCCCTTTGGCATTTTATATGCTTATATTTGCTATATATGGTAGCAATGCTGTGGTCATTTTAGCTTT	120
Rat:	ATGTGGAATCTAACGGGCACTGAGCTCTTCCACTGACTGCTCAAGTCCCTTGGCATTTTATATGTCCTGCTTTTGCTATATACAAATAGGCAATGCTGTGGTCATTTTAGCTTT	120
Human:	GTCGTGGACAAAAACCTTAGACATCGAAGTAGTTATTTTTTTCTTAACTTGGGCATCTCGACTCTTTGTTGGGTGTAATCCATTCCTTGTATCAATCCCTTCACAGCTGTTCGAATGG	240
Guinea Pig:	ATTGTGGACAGAAATCTTAGACATCGAAGTAATTAATTTTTTTCTTAATCTTGGCCATGTCAGACTCTTTTGTGGGTGTAATCCATTCCTGTATCAATCTTCTCGTACTTAATCTG	237
Mouse:	GTCGTGGACAGAAACCTTAGACATCGAAGTAATTAATTTTTTTCTTAATTTGGCTATTTCTGACTCTTCGTGGGTGTAATTTCCATTCCTCGTACATCCCTACAGTGTGTTAACTGG	240
Rat:	GTAGACAGACAGAAACCTTAGACATCGAAGTAATTAATTTTTTTCTTAATTTGGCTATTTCTGACTCTTCGTGGGTGTAATTCATTCCTGTACATCCCTTCACAGCTGTGTTAACTGG	240
Human:	GATTTTGGAAAGGAAATCTGTGTAATTTTGGCTACTACTACTACTATCTGTATATGATACAGCATCTGTATATATATGATATGCTCATACAGTACATAGTACATCCCTGTCAGTCTCAATGCTGTG	360
Guinea Pig:	ACTTCTGGAAAGAGAGCTTGTGTAATTTTGGCTACTACTACTACTATCTGTATATGATACAGCATCTGTATATATATTTGCTCATACAGTACATAGTACATCCCTGTCGAATGCTGTG	357
Mouse:	AATTTTGGAAAGTGAATCTGCATGTTTGGCTACTACTACTACTATCTTTTGTGACACGAGATCTGTATCAATATATGTGCTCATATAGTACATACATACAGTACAGTTCGAATGCTGTG	360
Rat:	AATTTTGGAAAGTGAATCTGCATGTTTGGCTACTACTACTATCTTTTGTGACACAGCATCCGTATACAGTATATGTTCCATTAAGTACAGATACAGTCAAGTTCGAACGCTGTG	360
Human:	TCTTATAGAACTCAACATCTACTGGGGCTCTTGAAGATTGTTACTCTGATGTTGGCCGTTTGGGTGCTTGTGGCTCTTATGTAATGGGCCATGATCTTAGTTCAGAGTCTTGGAAAGATGA	480
Guinea Pig:	TGTTATAGAGCTTCACGACTCTGGGACCTTGGAAATTTGCTCAGATGTTGGCTGTTTGGATATTTCTCTTCATATGACAAATGGGCCGATGATTCGATTTCAAGTCTTGGCAGAAATAC	477
Mouse:	TCTTATAGAGCTTCACACACTCTGGGATCAATGGAATTTGTTGTCAAATGGGTGGCTGTTTGGATCTGGCTTCTTGGTAAATGGCCGATGATCTTGCTTCAATCTTGGAAAGAACAC	480
Rat:	CGTTATAGAGCTTCACGACACTGGGACTCTGAAATATGTTTGTCTCAATGGTGGCTGTTTGGATGACTGGCTTCTTGTGATCAATGGCCCAATGATTCGGCTTGGAAATCTTGGAAAGAACAC	480
Human:	GGT---AGT---GAATGTGAACCTTGATTTTATTTTCGGAATGATACATCTCTGATGTTGGCCATTCATCATTTCTTGGAAATGTGTAATCCAGTCAATCTTAGTCTGCTTATTTCAACATGAATATTAT	594
Guinea Pig:	ACT---ACA---GAATGTGAACCTTGATTTTATTAATAAGTGTACTTTGCTCTCCCTACATCATATTATGGAAATCCGTGATCCCATCTGTATATGTTGCTAATTCAGGGCCCATATTAC	591
Mouse:	ACCAACACAAAGAGACTGTGAGCTGTGGCTTTGTTACAGAGTGTACTCTTCACATTAATCATGCTCTTGGAAATTCGCTCTCCGTCAATCTGTGGCTTATTTCAATATGACAGATTTAC	600
Rat:	ACCAACACAGAGAGTGTGAGCTGTGGCTTTGTTACTGATGTGTACATCTCTGCAATTAACAGCATTTCTTGGAAATTCCTGCTCCGTCTGTCTTCTTGTGTGTATTTCAAGTGTACAGATTTAC	600
Human:	TGGAGCTGTGGAAAGCGTATCATCTCAGTAGGTGTCGAAAGCCATCTTGAGCTG--ACTGTGCTCTTCCAAACATCTGTGACATCTGTGACATCTCATTCAGAGTATGATCATTTCAAGGAGATCT	711
Guinea Pig:	TGGAGCTGTGGAAAGCGATGAAATCTGACAGAGTGCCTCAGCCACCTGTACTCCCTCTGACATCTTCCAGAGATGACACAGGACATCTGTGACAGACAGCCGATTCGAAGGCGACT	711
Mouse:	TGGAGCTGTGGAAAGCGTAGGGGCTCTCAGTAGGTGCTCTGACCATGCTGTGATTC--TCCACTACCTCTTCCAGTCTCTGAGGACATTTACAGAGCTGTGGGTGCTTGGACAGCAAGT	717
Rat:	TGGAGCTGTGGAAAGCGTGGAGTCTCAGTAGGTGCCCTTAGCCACGCTGGAATTC--ATGCTACCTCTTCCAGGGGCACTGTGACATCTCAGCAAGAACTGTGGGTGTGTAAGGACAAAT	717
Human:	CTTCTCTGACGACAGAGTTCCTGATCTTTTCAATTCAGAGACACAGAGGAGAAAGTAGTCTCATGTTTTTCTCTCAAGAACCAAGATGATGATATGCAATTTGCTCCAAATGGGT	831
Guinea Pig:	CTGCGACAGCGGAAAGAAACAATCTGCTCTCTTGGTTCAAGCAATGTCAAGGAGAAAGAGCAGTCTCTTGTTTTCCATTAAGGCTTAACAAGACAGCAATGTGATCTGCTCCAAATGGGT	831
Mouse:	AATCTGTGATTTGAAGAGATCAGTCTCATCTCTGACATCTCAGAAAGTCTCTGAAAGAAAGAGCAGATCTGTGTCTCTTAAGGATCTCATATGAACAGAGATACACTGCTTCAAAATGGGT	837
Rat:	CTTCTGTGATTTAAAGAACAGCGGCATCTCTTCAATTCAGAAAGTCTCCAGAGGAAAGAGCAGTCTCTGTGTCTCTTAAGGATCTCATATGAGCGGTATATCATGTGCTTCAAAATGGGT	837
Human:	TCTCTTCTCCCAATCAGATTCTGTAGCTCTTCAACCAAAGGGAACAATCTGTGAATCTGTATAGGCCAGGAAATTAAGCCAAAGTCACTGTGGCATTTCTTAGGGGTCTTGTGCTTTGCTGGGCT	951
Guinea Pig:	TTCCTCTCCCAATCAGATTCCCTGTGCTCTTACGAAAGGGGAACATATGAACTTTTTCAGAGCCAGGAAATTAAGCCAAAGTCACTGTGGCATTTCTTAGGGGTCTTGTGCTTTGCTGGGCT	951
Mouse:	TCTCTTCTGGGCAATCGAAAGTGCACGCTCTTCCGCAAGGGGATGACAGAGCTTCTTCAAGGACAGAAAGCTAAGCCAGGTCACTGTGGCATTTCTTAGGGGTCTTGTGCTTTGCTGGGCT	957
Rat:	TCTCTTCTGCCGATTCAGAAAGCCCAATGCTCTTACCAAGAGAGCAGTGTGAGCTTCTTCAAGGACAGGAAGCTAAGCCAGGTGTGCTAGCTGTCTCTTGTAGTCTTTTGTGCATTTTGTGGGCT	957

Figure 7B

Human:	CCATATTCCTCTGTTCCAAATGTCCCTTCATTTTATTCCTCAGCAACAGGTCCTAATCAGTTTGTATAGAAATTCATTTTGGCTTCAAGTGGTCAATTCCTTGTCAATCCTCTTTTG	1071
Guinea Pig:	CCATATTCAGTACTACAGTTATCTACTCATTTTTCCTGAAAGGAACCTGATTAATCAACTGTAACAATGCTTTTGGCTTCCAGTGGTTCAATTCCTTGTAAATCCCTTTTG	1071
Mouse:	CCATATGCTGTTCCAAATGTCTTTCAACTTACCCCAAGGAAAGGAAATCGGTGTAGAGCATGCTTCTGCTGCAATGGTTCAATTCGTTGTAAATCCCTTTCTG	1077
Rat:	CCGTATGCTGTTCCAAATGTCTTTCAACTATCGCAGAGGGAGCGCCCAATCGATTTGTACAGCATAGCTTTTGGCTACAGTGGTTCAATTCCTTAATCCCTTTCTA	1077
Human:	TATCAATGTGCACAAAGCGCTTTCAAAAGCTTTCTTGAATAATTTGTATATAAAAGCAACCTTACCATCACAACAGTGGTCAATCTTTAA	1173
Guinea Pig:	TATCAATGTGCACAAAGCTTTTCAGAAAGCTTTCTGAAAATATCTTCTGTGAGAAAGCAATCCAGCCACCA---CAGAACCGCTCAATATCCACTTGA	1170
Mouse:	TACCTTTGTGTACAGAGCGTTTCCAGAAAGGCTTTCTGGAAGATATCTTTGTGTGACAAAGCAACGAGCGCTGTCA---CAGAACAGTCAGTATCTTCTTGA	1176
Rat:	TACCTTTGTGCACAGAGCTTTCAGAAAGGCTTTCTGGAAGATATCTGTGTGACAAAGCAACGACACTTCA---CAGACCCAGTCAGTATCTTCTTGA	1176

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